

BOROUGH OF CARLISLE

Annual Water Quality Report for 2026

Your Drinking Water in 2025

PWS ID: 7210002

Serving the residents of the Borough of Carlisle and applicable portions of Middlesex and North and South Middleton Townships

Stay Informed About Your Water



Where Your Drinking Water Comes From

Most drinking water in the United States comes from a river, a lake, or from an underground well. The water we provide for you comes from the Conodoguinet Creek, which is surface water. Our surface water treatment plant is located at 165 Longs Gap Road in Carlisle, PA.

We Protect the Source

Making the water safe to drink starts by protecting the place it comes from. Our water source is surface water from the Conodoguinet Creek in Carlisle, Cumberland County, Pennsylvania. The water is treated at our Carlisle Borough Municipal Authority filtration plant. A *Source Water Assessment* of the Conodoguinet Creek, which supplies water to the Carlisle Borough Municipal Authority filtration plant, was completed by the Susquehanna River Basin Commission (SRBC) for the Pennsylvania Department of Environmental Protection (PA DEP). The Assessment has found that the Conodoguinet Creek Intake is potentially most susceptible to agriculture, urban runoff, and

industrial discharges. Overall, the Conodoguinet Watershed has a moderate risk of significant contamination. A summary report of the Assessment is available on the Borough's website: www.carlislepa.org/SWPA. Complete reports were distributed to municipalities, water suppliers, local planning agencies, and PA DEP offices. Copies of the complete report are available for review at the PA DEP Southcentral Regional Office, Records Management Unit at (717) 705-4732.

What Is in Your Source Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:



- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

To ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 800-426-4791.

Sampling and Testing

We take more than 1500 samples across our water system. We are testing for bacteria, metals, and chemicals to make sure the water continues to be safe to drink.

Bacteria

We conduct regular bacteria testing, as required by law, by collecting samples from ten designated locations within the water system for analysis. More thorough testing, evaluation, and action is required if bacteria is found in even a small percentage of tests.

Disinfection by-products (Trihalomethane (THM) or Haloacetic Acids (HAA))

Four times per year, we test for byproducts of the disinfection process. When chlorine, the disinfectant we use to protect against the water of bacteria and viruses, starts to break down in the water, it can form new compounds. These compounds, trihalomethanes (THM) and haloacetic acid (HAA), have been known to cause cancer at high levels. The legal limit for drinking water is 80 parts per billion and 60 parts per billion respectively. We test for these compounds at four different locations in the water system.

Lead and Copper

We take water samples from thirty different homes in our system every three years to test them for lead and copper. More information about lead and copper can be found on page 6.

Frequently Asked Questions

Is my water hard or soft?

Hardness describes the level of dissolved natural minerals (calcium and magnesium) in drinking water. These minerals are an important part of a healthy diet. Hard water contains more of these minerals. A gradual build-up of calcium and magnesium from hard water can form harmless, filmy white deposits on faucets, bathtubs, and teakettles. Hard water also requires more soap to lather fully.

The Borough of Carlisle's water is considered hard due to the amount of dissolved calcium and magnesium in our water source. The water hardness in Carlisle averages 168 ppm or mg/L, or expressed another way, 9.8 grains per gallon. The water will be harder during dry or drought periods than it will be during wet weather. Water hardness ranged from 85 – 237 ppm or 5.0 – 13.8 grains per gallon throughout the year.

Why is there chlorine in my water?

Chlorine is used to destroy disease-causing organisms in water, an essential step in delivering safe drinking water and protecting public health. According to the EPA and other health agencies, chlorine is currently one of the most effective disinfectants to kill harmful microorganisms. Chlorination is the most widely used method for disinfecting water supplies in the United States. Chlorine is first applied at the water treatment facility, and a continual residual is maintained to

keep the water safe as it travels from the source, through the distribution system, and finally to your water tap. Disinfection of all public water supplies is required by Federal and State laws and regulations, including the *Safe Drinking Water Act* and the *Surface Water Treatment Rule*.

Does the Borough of Carlisle add fluoride to my water?

The Borough of Carlisle does add fluoride to the water. Fluoride is a naturally occurring mineral that protects teeth from tooth decay. Almost all water contains some naturally occurring fluoride, but usually not enough to prevent tooth decay. Many communities adjust the amount of fluoride in the water supply to a level known to reduce tooth decay and promote good oral health. Almost 75 percent of the U.S. population is served by fluoridated community water systems. Our target fluoride concentration is 0.7 mg/L.

Why does my water look milky or cloudy at times?

The cloudy water is caused by tiny air bubbles in the water similar to the gas bubbles in beer and soda. After a little while, the bubbles rise to the top and are gone. Cloudiness may occur more often in winter when the drinking water is cold and can be enhanced by the aerators that are installed on modern home faucets.

Your Role in Water Quality

Check Your Home or Business' Plumbing for Lead and Copper

We work hard to deliver high-quality water to your property, including testing drinking water in our distribution system to ensure it meets current drinking water standards. Once it passes through your meter, however, it enters your home's environment—beyond our control but under yours.



Some of the things that can change the water quality on your property include your plumbing and pipe material, how long you go without running the water, and whether or how you connect outdoor hoses to your home's water supply. Lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Borough of Carlisle is responsible for providing high quality drinking water and removing lead pipes from our distribution system but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier

to reduce lead in drinking water. If you are concerned about lead in your water and would like to have it tested (fees apply), please contact the Borough of Carlisle Laboratory at 717-240-6991. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <http://www.epa.gov/safewater/lead>. The Borough of Carlisle prepared a service line inventory that includes the type of material contained in each service line in our distribution system. This inventory can be accessed by accessing our website at www.carlislepa.org/servicematerial.



If you have not filled out your lead service line information survey yet, please visit our website at www.carlislepa.org/servicematerial, scan the QR code for the online form, or contact Sara Crawshaw at 717-240-6991.

Look Out for Special Populations

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people such as people with cancer undergoing chemotherapy, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at 800-426-4791.

Table of Water Data for 2025

We routinely monitor contaminants in your drinking water according to federal and state laws. The following tables show the results of our monitoring for the period of January 1 to December 31, 2025. The State allows us to monitor some contaminants less than once per year because the concentration of these contaminants does not change frequently. Some of our data is from prior years in accordance with the *Safe Drinking Water Act*. The date has been noted on the sampling results table.

Lead and Copper – Tested throughout the Borough of Carlisle. Testing is done every three years. Most recent tests were done in 2025.

Item Detected	EPA's AL	Ideal Goal (MCLG)	90% of customers' homes were less than	Range of sampling results	Units	# of Sites Above AL of Total Sites	Violation	Source
Lead	15	0	2.6	0 – 37	ppb	2 out of 32	No	Corrosion of household plumbing; Erosion of natural deposits
Copper	1.3	1.3	0.12	0 – 0.55	ppm	0 out of 32	No	Corrosion of household plumbing; Erosion of natural deposits; Leaching from wood preservatives

MCL - Maximum Contaminant Level: This is the highest level allowed of a pollutant in drinking water. MCLs are set as close as possible to the goal using the best available technology.

MCLG - Maximum Contaminant Level Goal: The goal level of a pollutant in drinking water. Below this amount, there is no known or expected health effect.

PPB - Part Per Billion = 1 drop of water in an Olympic size swimming pool

PPM - Part Per Million = 1 drop of water in a hot tub

Inorganic Chemicals (IOC) – Tested at Borough of Carlisle.

Chemicals Detected	Highest Level Allowed (MCL)	Ideal Goal (MCLG)	Highest Result	Range of Test Results for the Year	Violation	Source
Nitrate	10 ppm	10 ppm	2.4 ppm	Single Sample	No	Runoff from fertilizer use; industrial or domestic wastewater discharges; erosion of natural deposits
Barium	2 ppm	2 ppm	0.03 ppm	Single Sample	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	2 ppm	2 ppm	0.54 ppm	Single Sample	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer & aluminum factories
Total Haloacetic Acids	60 ppb	N/A	51 ppb	27 – 51 ppb	No	By-product of drinking water disinfection (chlorination)
Total Trihalomethanes	80 ppb	N/A	59 ppb	22 – 59 ppb	No	By-product of drinking water disinfection (chlorination)

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MCLG - Maximum Contaminant Level Goal: The goal level of a pollutant in drinking water. Below this amount, there is no known or expected health effect.

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Total Coliform Bacteria – Tested at Borough of Carlisle.

Contaminant	Treatment Technique	Ideal Goal (MCLG)	Assessments / Corrective Actions	Violation	Source
Total Coliform Bacteria	Any system that has failed to complete all the required assessments or correct all identified sanitary defects is in violation of the treatment technique requirements	N/A	0 – None Needed	No	Naturally present in the environment

PPM - Part Per Million = 1 drop of water in a hot tub

Total Chlorine Residual – Routinely Monitored at Borough of Carlisle.

Sample Location	Minimum Disinfectant Residual Level Allowed	Maximum Disinfectant Residual Level Allowed	Lowest Level Detected	Yearly Range	Violation	Source
Entry Point Chlorine Residual	0.20 ppm	N/A	1.58 ppm	1.58 – 2.83 ppm	No	Water additive used to control microbes
Distribution System Chlorine Residual	0.2 ppm	4.0 ppm	1.37 ppm	1.37 – 1.93 ppm	No	Water additive used to control microbes

PPM - Part Per Million = 1 drop of water in a hot tub

Total Organic Carbon – Tested at Borough of Carlisle.

Sample Location	Range of % Removal Required	Range of % Removal Achieved	Number of Quarters Out of Compliance	Violation	Source
Plant Effluent to Distribution System	25 %	50%	0	No	Naturally present in the environment

Turbidity – A Measure of Clarity: Tested at Borough of Carlisle.

Substance	Parameter	Sample Date	Violation	Source
Treatment Technique Requirement: 95% of samples must be at or below 0.3 NTU	99% below 0.27 NTU	12 months	No	Soil erosion and runoff
Highest single value for the year	2.60 NTU	4/8/2025	No	Soil erosion and runoff

NTU - Nephelometric Turbidity Units: Turbidity is measured with an instrument called a nephelometer. Measurements are given in nephelometric turbidity units.

Per – and Polyfluoroalkyl Substances (PFAS) – Tested at Borough of Carlisle.

Contaminant	Highest Level Allowed (MCL)	Ideal Goal (MCLG)	Highest Result	Range of Test Results for the Year	Violation	Source
PFOS	18 ppt	0 ppt	13.9 ppt	7.3 – 13.9 ppt	No	Synthetic chemicals used in a wide range of consumer products and industrial applications
PFOA	14 ppt	0 ppt	5.5 ppt	2.6 – 5.5 ppt	No	Synthetic chemicals used in a wide range of consumer products and industrial applications

PPT - Part Per Trillion = 1 drop of water in a lake that's 6 square acres

MCL - Maximum Contaminant Level: This is the highest level allowed of a pollutant in drinking water. MCLs are set as close as possible to the goal using the best available technology. Levels set by Pennsylvania Department of Environmental Protection.

MCLG - Maximum Contaminant Level Goal: The goal level of a pollutant in drinking water. Below this amount, there is no known or expected health effect.

Unregulated Contaminant Monitoring Rule 5

The EPA specified monitoring for 29 per- and polyfluoroalkyl substances (PFAS) and lithium to be monitored every quarter of 2023. These contaminants are those that do not yet have a drinking water standard set by EPA. The purpose of this monitoring is to help EPA decide whether the contaminants should have a standard. The PA DEP has set state standards for PFOS at 18 ppb and PFOA at 14 ppb. The following table lists the contaminants that our testing detected in 2023.

The Borough of Carlisle pilot tested two treatment options for PFAS removal – Granulated Activated Carbon (GAC) and Ion Exchange Resin (IX) – to determine which one is appropriate for our water source. Treatment is planned to achieve non-detectable levels of PFAS.

Unregulated Contaminant	Average Level Detected	Range of Detection	MRL	Source
PFBS	0.0053 ppb	0.0033 – 0.0072 ppb	0.005 ppb	PFAS are a group of synthetic chemicals used in a wide range of consumer products and industrial applications including non-stick cookware, water-repellent clothing, stain resistant fabrics and carpets, cosmetics, firefighting foams, electroplating, and products that resist grease, water, and oil. PFAS are found in the blood of people and animals and in water, air, fish, and soil at locations across the United States and the world.
PFBA	0.0052 ppb	N/A	0.005 ppb	
PFHxA	0.0051 ppb	N/A	0.003 ppb	
PFOS	0.0082 ppb	0.0052 – 0.0113 ppb	0.004 ppb	
PFOA	0.0047 ppb	0.0044 – 0.0050 ppb	0.004 ppb	
PFPeA	0.0039 ppb	N/A	0.003 ppb	
Lithium	ND	ND	9.0 ppt	

PPB - Part Per Billion = 1 drop of water in an Olympic size swimming pool

PPT - Part Per Trillion = 1 drop of water in a lake that's 6 square acres

MRL – Minimum reporting limit

Definitions

ACRONYMS	DEFINITIONS
MCLG	Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
MCL	Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
MRL	Minimum Reporting Limit: the lowest concentration of a substance that can be reliably measured and reported by a specific analytical method under normal laboratory conditions
MRDLG	Maximum Residual Disinfectant Level Goal: This is the lowest amount of cleaning chemical drinking water should have, because it is the lowest amount needed to make sure bacteria and viruses can't live.
MRDL	Maximum Residual Disinfectant Level: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
mg/L	Number of milligrams in one liter of water
N/A	Not applicable
ND	Not detected
NTU	Nephelometric Turbidity Units: Turbidity is measured with an instrument called a nephelometer. Measurements are given in nephelometric turbidity units.
PPM	Part Per Million= 1 drop of water in a hot tub
PPB	Part Per Billion = 1 drop of water in an Olympic size swimming pool
PPT	Part Per Trillion (ppt) = 1 drop of water in a lake that's 6 square acres

Quarterly Board Meetings

We need your understanding and support to be successful. We hope you will get involved with us on projects, programs, and policies. You are welcome to attend our Municipal Water Authority meetings. We meet on third Wednesday of January, April, and July at 5:00 PM and at 4:00 PM the third Wednesday of October at the Carlisle Water Treatment Plant at 165 Longs Gap Road. The October meeting includes an annual facility tour open to the public. We always make time to hear from guests and answer questions so please join us to learn more about what we are working on. Your input is important to us!

Questions or Concerns

We want our residents to be informed about their drinking water. If you have any questions concerning the drinking water results and our operations, please contact Sara Crawshaw, Borough of Carlisle Laboratory Supervisor, at 717-240-6991, or Borough offices at 717-249-4422.

En español

Este informe contiene información muy importante sobre su agua potable. Haga que alguien lo traduzca para usted, ó hable con alguien que lo entienda.

Violations

The Borough of Carlisle had no violations for 2025.